



# Mineral Industry Surveys

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## TUNGSTEN IN FEBRUARY 2003

U.S. net production of intermediate tungsten product, including metal powder and tungsten carbide powder produced from metal powder, was 38% higher during January through February 2003 than net production during the same period in 2002, according to the U.S. Geological Survey.

Total U.S. reported consumption of ferrotungsten, tungsten metal powder, tungsten carbide powder, tungsten scrap, and other tungsten materials in January through February 2003 was 21% higher than that consumed during the same period in 2002. These materials were used to make alloys, cemented carbides, mill products, catalysts, and pigments.

Data for U.S. imports and exports for February 2003 will be published in a subsequent issue.

**Update**

Prices for tungsten ore concentrates in dollars per metric ton unit from Metal Bulletin are listed below. Prices in dollars per short ton unit were converted from metric ton unit prices and rounded to the nearest dollar. These prices represent combined prices for wolframite and scheelite ore concentrates with a minimum tungsten trioxide (WO<sub>3</sub>) content of 65%. The prices for March 1-31, 2003, are as follows:

Low—\$37/metric ton unit WO<sub>3</sub> (\$34/short ton unit WO<sub>3</sub>)  
High—\$48/metric ton unit WO<sub>3</sub> (\$44/short ton unit WO<sub>3</sub>)

TABLE 1  
U.S. SALIENT TUNGSTEN STATISTICS 1/

(Metric tons, tungsten content)

Period	Concentrate				Intermediate products				
	Reported consumption	Imports for consumption	Stocks, end of period		Reported scrap consumption	Net production 4/	Reported consumption 5/	Stocks, end of period	
			Industry 2/	U.S. Government 3/				Industry 6/	U.S. Government 3/
2002:									
February	W	79	W	NA	341	811	788	693	NA
March	W	212	W	NA	270	750	772	640	NA
April	W	292	W	NA	421	743	776	667	NA
May	W	292	W	NA	393	1,040	949	650	NA
June	W	439	W	31,200	351	1,080	924	662	1,100
July	W	362	W	30,400	345	931	949	654	1,020
August	W	418	W	30,500	228	1,110	951	737	987
September	W	341	W	30,100	240	1,110	970	750	981
October	W	341	W	30,100	260	1,120	965	765	975
November	W	509	W	30,100	239	1,080	976	752	948
December	W	600	W	30,100	236	1,140	941	749	947
January-December	W	4,090	XX	XX	3,670	11,700	10,700	XX	XX
2003:									
January	W	250	W	29,800	230 r/	1,070	951 r/	614	927
February	W	NA	W	29,800	228	1,090	954	772	927
Total	W	NA	XX	XX	458	2,160	1,910	XX	XX

r/ Revised. NA Not available. W Withheld to avoid disclosing company proprietary data. XX Not applicable.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Reported by consumers.

3/ Data from Defense National Stockpile Center. Includes material committed for sale pending shipment.

4/ Net production of tungsten metal powder and tungsten carbide powder.

5/ Includes estimates and scrap.

6/ Data for tungsten metal powder and tungsten carbide powder reported by producers.

TABLE 2  
U.S. PRODUCTION, CONSUMPTION, AND STOCKS OF  
AMMONIUM PARATUNGSTATE, BY MONTH 1/

(Metric tons, tungsten content)

Period	Production	Consumption	Stocks, end of period 2/
2002:			
February	W	814	118
March	W	653	W
April	W	830	W
May	W	798	W
June	W	893	103
July	W	740	212
August	W	794	97
September	W	828	102
October	W	782	109
November	W	W	86
December	W	W	77
Total	W	W	XX
2003:			
January	W	814 r/	W
February	W	789	83
Total	W	1,600	XX

r/ Revised. W Withheld to avoid disclosing company proprietary data. XX Not applicable.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Producers and consumers.

3/ Does not include withheld data.

TABLE 3  
U.S. PRODUCTION AND STOCKS OF TUNGSTEN PRODUCTS 1/

(Metric tons, tungsten content)

Product 3/	Net production 2/				Stocks at end of period		
	2003				2003		
	2002	January	February	Year to date	2002	January	February
Metal powder	7,720	730	756	1,490	441	305	464
Tungsten carbide powder (made from metal powder)	3,960	340	336	676	308	309	308
Total	11,700	1,070	1,090	2,160	749	614	772

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Gross production less quantity used to make other products in table.

3/ Data for cast and crystalline tungsten carbide powder and tungsten chemicals are withheld to avoid disclosing company proprietary data; not included in "Total."

TABLE 4  
U.S. REPORTED CONSUMPTION OF TUNGSTEN, BY END USE 1/ 2/ 3/

(Metric tons, tungsten content)

End use	2003		
	January	February	Year to date
Steels	34	35	69
Superalloys	39 r/	35	75
Other alloys (excludes steels and superalloys) 4/	W	W	W
Cemented carbides 5/	462	459	921
Mill products made from metal powder	W	W	W
Chemical uses	W	W	W
Miscellaneous and unspecified	416	425	841
Total	951 r/	954	1,910

r/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Does not include materials used in making primary tungsten products.

3/ Includes estimates.

4/ Includes welding and hard-facing rods and materials, wear- and corrosion-resistant alloys, and nonferrous alloys.

5/ Includes diamond tool matrices, cemented and sintered carbides, and cast carbide dies or parts.

TABLE 5  
U.S. REPORTED CONSUMPTION AND CONSUMER STOCKS OF TUNGSTEN MATERIALS 1/

(Metric tons, tungsten content)

Period	Ferro- tungsten	Tungsten metal powder	Tungsten carbide powder	Tungsten scrap	Other tungsten materials 2/	Total
<b>Consumption:</b>						
<b>2002:</b>						
February	38	230	473	37	9	788
March	38	223	465	40	6	772
April	34	220	479	36	6	776
May	33	W	465	W	6	949
June	33	W	471	W	6	924
July	34	W	467	W	6	949
August	32	W	464	W	6	951
September	33	W	476	W	6	970
October	34	W	468	W	6	965
November	34	W	470	W	6	976
December	34	W	464	W	6	941
Total	415	W	5,630	W	76	10,700
<b>2003:</b>						
January	33	W	466 r/	W	6	951 r/
February	34	W	461	W	6	954
<b>Stocks:</b>						
<b>2002:</b>						
February	36	29	540	41	9	655
March	33	32	547	40	9	661
April	32	36	540	45	9	663
May	28	34	544	43	9	657
June	34	40	552	42	9	677
July	28	39	546	36	9	657
August	27	36	547	39	9	658
September	23	33	544	34	9	642
October	29	34	536	42	9	649
November	24	39	539	35	9	646
December	21	38	539	37	9	643
<b>2003:</b>						
January	28	37	546	33 r/	9	652 r/
February	23	35	542	34	9	643

r/ Revised. W Withheld to avoid disclosing company proprietary data; included in "Total."

1/ Includes estimates.

2/ Includes tungsten chemicals.

TABLE 6  
U.S. IMPORTS FOR CONSUMPTION OF TUNGSTEN, BY COUNTRY 1/

(Metric tons, tungsten content)

Period and country of origin	Ores and concentrates	Ammonium tungstates	Ferrotungsten	Metal powder	Tungsten carbide powder	Other 2/	Total
2002	4,090	2,400	480	642	901	1,180	9,690
2003:							
January:							
Austria	--	--	--	--	--	1	1
Belgium	--	--	--	(3/)	--	1	1
Canada	148	--	--	(3/)	48	--	196
China	21	200	29	10	18	48	325
Czech Republic	(3/)	--	--	--	--	--	(3/)
France	--	--	--	--	(3/)	--	(3/)
Germany	--	20	--	2	2	1	25
Hong Kong	--	--	--	--	--	(3/)	(3/)
Hungary	--	--	--	--	--	(3/)	(3/)
India	--	--	--	--	--	(3/)	(3/)
Ireland	--	--	--	1	--	--	1
Israel	--	--	--	10	21	2	33
Italy	--	--	--	--	--	(3/)	(3/)
Japan	--	--	--	1	11	1	13
Korea, Republic of	--	--	--	8	1	--	9
Luxembourg	--	--	--	--	2	--	2
Netherlands	--	--	--	--	--	(3/)	(3/)
Peru	9	--	--	--	--	--	9
Portugal	48	--	--	--	--	--	48
Russia	--	--	--	--	--	(3/)	(3/)
Rwanda	24	--	--	--	--	--	24
Singapore	--	--	--	--	--	1	1
Spain	--	--	--	--	--	(3/)	(3/)
Sweden	--	--	--	--	--	(3/)	(3/)
Switzerland	--	--	--	--	--	(3/)	(3/)
Taiwan	--	--	--	--	--	(3/)	(3/)
United Kingdom	--	--	--	--	--	(3/)	(3/)
Total	250	220	29	32	102	57	691

-- Zero.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Includes other unwrought tungsten, wrought tungsten, calcium and other tungstates, tungsten oxides, tungsten chlorides, other tungsten compounds, ash and residues containing mainly tungsten, and other mixtures of inorganic compounds containing tungsten. Tungsten content estimated in part.

3/ Less than 1/2 unit.

Note: Imports of waste and scrap in January 2003 totaled 85 metric tons, tungsten content.

Source: U.S. Census Bureau.

TABLE 7  
U.S. EXPORTS OF TUNGSTEN, BY COUNTRY 1/

(Metric tons, tungsten content)

Period and country of destination	Ores and concentrates 2/	Ammonium tungstates	Metal powder 2/	Tungsten carbide powder	Other 3/	Total
2002	94	69	496	1,250	1,050	2,960
2003:						
January:						
Australia	--	--	(4/)	--	--	(4/)
Belgium	--	--	--	1	1	2
Brazil	--	--	(4/)	(4/)	(4/)	1
Canada	--	--	2	8	6	16
China	--	--	--	--	3	3
Colombia	--	--	--	--	(4/)	(4/)
Czech Republic	--	--	--	--	(4/)	(4/)
Egypt	--	--	--	--	1	1
France	--	--	3	1	12	16
Germany	--	--	10	91	5	105
Hong Kong	--	--	(4/)	--	2	2
Hungary	--	--	--	--	(4/)	(4/)
India	--	--	--	1	5	6
Indonesia	--	--	(4/)	--	--	(4/)
Ireland	(4/)	--	--	(4/)	--	(4/)
Israel	--	--	(4/)	--	1	1
Italy	--	--	1	1	4	7
Japan	--	--	1	3	2	6
Korea, Republic of	--	--	(4/)	2	1	3
Luxembourg	--	--	--	(4/)	--	(4/)
Mexico	--	--	1	1	22	24
Netherlands	--	--	(4/)	--	--	(4/)
New Zealand	--	--	--	--	(4/)	(4/)
Philippines	--	--	--	--	1	1
Singapore	--	--	1	(4/)	(4/)	1
South Africa	--	--	--	10	--	10
Spain	--	--	1	(4/)	2	2
Sweden	(4/)	--	(4/)	6	(4/)	6
Switzerland	--	--	(4/)	--	--	(4/)
Taiwan	--	--	1	--	7	9
United Kingdom	--	--	1	55	1	57
Other	(4/)	--	(4/)	--	1	1
Total	1	--	23	179	78	281

XX Not applicable. -- Zero.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Tungsten content estimated from reported gross weight.

3/ Includes unwrought tungsten, including bars and rods obtained simply by sintering, wrought tungsten, ferrotungsten, and other tungstates. Tungsten content estimated in part.

4/ Less than 1/2 unit.

Note: Estimated exports of waste and scrap in January 2003 totaled 25 metric tons, tungsten content.

Source: U.S. Census Bureau.